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FOREWORD

This Second Annual Report of the Massachusetts Bay Transportation Authority covers the thirteen month period, August 1, 1965, through August 31, 1966. As provided by Chapter 650 of the Acts of 1965, the fiscal/reporting periods will be of thirteen months duration through December 31, 1970. Thereafter the Authority will operate on a calendar year basis.

During the thirteen month period covered by this report, a modern management organization and cost reduction program was instituted including such advanced techniques as an appropriations control program; manpower, overtime, and inventory controls; value engineering and analysis programs.

During this period the Authority devised the first comprehensive development program for public transportation in the Massachusetts Bay area.

This was a period of newness. New personnel policies were introduced. New equipment was ordered. New extensions were begun. A new Authority symbol

and color scheme were adopted.

While effective planning is an integral part of any program for modernization and expansion if that program is to succeed, action — visible action — gives evidence that plans will become realities. This was a period of action.

Construction began on the South Shore rapid transit extension. Authority vehicles displayed the new symbol and color scheme. Work began on Arlington Street Station, the pilot project in the Authority's station modernization program.

The achievements of these thirteen months were summed up in a statement made by the Governor of the Commonwealth at the Neponset River groundbreaking ceremony, August 18, 1966, "Under the aegis of the Massachusetts Bay Transportation Authority, the Commonwealth and its people have the most forward-looking program in North America in support of public transit."

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SECOND ANNUAL REPORT / 1966
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY

TO:
 His Excellency the Governor,
 Advisory Board to the Massachusetts Bay
 Transportation Authority, and
 The General Court

In accordance with the requirements of Section 5 (h) of Chapter 161A of the General Laws, as modified by Chapter 650 of the Acts of 1965, the Directors of the Massachusetts Bay Transportation Authority herewith render the second report of the Authority which covers the results of operations for the fiscal period August 1, 1965, through August 31, 1966.

SUMMARY OF THE NET COST OF SERVICE
FROM AUGUST 1, 1965, THROUGH
AUGUST 31, 1966

Total income to the Authority for the period was \$44,511,496.23.

Wages and fringe benefits were placed at \$50,128,-075.77. The latter cost, along with other items and various fixed charges, brought total expenses for the period to \$70,648,059.26.

The difference between total income and total expenses is \$26,136,563.03 which represents the cost of service in excess of income for the fiscal period.

This latter figure, less state financial contract assistance of \$3,250,000.00, fuel tax reimbursement of \$233,110.03 and an unreimbursed deficit relating to depreciation in the amount of \$2,050,401.00 brings the net assessable cost of service for the 78 cities and towns of the district to \$20,603,052.00.

In addition to the Authority's net cost of service, there are three other items to be considered by the 78 communities in their 1967 account settlement with the Commonwealth of Massachusetts. They are shown in the following table.

Net Cost of Service	\$20,603,052.00
Interest Charged by State Treasurer on	
Temporary Borrowings (Estimated)	\$901,000.00
Expenses of Boston Metropolitan District	\$16,000.00
TOTAL	\$21,520,052.00
Less Pupils' Reimbursement	
Chapter 71, Section 7B (Estimated)	\$1,200,000.00
Net Cost to Communities	\$20,320,052.00

A full breakdown of the Authority's net cost of service, including all elements of cost for the fiscal operation and the apportionment of these costs by both express and local service follows:

BOARD OF
DIRECTORS



Judge Charles C. Cabot
 Chairman of the Board



William J. Fitzgerald



Robert P. Springer



Philip Kramer



George L. Anderson

General Rush B. Lincoln, Jr.
 General Manager



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
STATEMENT OF NET COST OF SERVICE BY EXPRESS AND LOCAL — ELEMENTS OF COST
FISCAL PERIOD AUGUST 1, 1965 TO AUGUST 31, 1966

	Express Service	Local Service	Total
Income:			
Revenue from Transportation	\$25,352,239.81	\$16,957,956.29	\$42,310,196.10
Revenue from Other Rwy. Operations	700,037.04	184,924.71	884,961.75
Non-operating Income	817,765.13	498,573.25	1,316,338.38
TOTAL INCOME	26,870,041.98	17,641,454.25	44,511,496.23
Operating Wages and Fringe Benefits:			
Wages	19,926,610.95	24,006,514.73	43,933,125.68
M.B.T.A. Pensions	1,237,026.19	1,470,243.02	2,707,269.21
Social Security Taxes	575,130.57	687,240.26	1,262,370.83
Workmen's Compensation & Insurance	(140,031.82)	(86,984.25)	(227,016.07)
Accident and Sickness Insurance	166,670.66	198,583.74	365,254.40
Group Life Insurance	197,036.84	234,390.06	431,426.90
Blue Cross - Blue Shield	654,974.74	777,985.96	1,432,960.70
Unemployment Insurance	5,618.00	6,638.52	12,256.52
Uniform and Work Clothes	72,059.79	138,367.81	210,427.60
TOTAL OPERATING WAGES AND FRINGE BENEFITS	22,695,095.92	27,432,979.85	50,128,075.77
Material and Other Items	1,965,644.46	2,974,076.33	4,939,720.79
Injuries and Damages	496,653.65	1,275,713.71	1,772,367.36
Depreciation	1,302,000.00	748,401.00	2,050,401.00
Interest on Unfunded Debt	498,296.72	463,982.87	962,279.59
Fuel	973,461.74	795,363.56	1,768,825.30
Taxes (Other than included above)	7,580.88	351,212.90	358,793.78
TOTAL OPERATING EXPENSES AND TAXES	27,938,733.37	34,041,730.22	61,980,463.59
Fixed Charges:			
Interest on Funded Debt — B.M.D.	3,123,607.31	1,111,589.81	4,235,197.12
Payment on Funded Debt — B.M.D.	2,292,434.36	1,720,678.18	4,013,112.54
Cambridge Subway Rental	406,662.08	-	406,662.08
Miscellaneous Debits — B.M.D.	7,414.40	5,209.53	12,623.93
TOTAL FIXED CHARGES	5,830,118.15	2,837,477.52	8,667,595.67
TOTAL CURRENT EXPENSES	33,768,851.52	36,879,207.74	70,648,059.26
COST OF SERVICE IN EXCESS OF INCOME	6,898,809.54	19,237,753.49	26,136,563.03
Less:			
State Financial Contract Assistance	3,250,000.00	-	3,250,000.00
Gas & Diesel Taxes Reimbursable	-	233,110.03	233,110.03
NET COST OF SERVICE — LOSS	3,648,809.54	19,004,643.46	22,653,453.00
Less — Unreimbursed Deficit	1,302,000.00	748,401.00	2,050,401.00
NET ASSESSABLE COST OF SERVICE	\$2,346,809.54	\$18,256,242.46	\$20,603,052.00

(Italics) denotes credit

Closed horse car — last horse car operated
on Marlboro Street, Dec. 24, 1900.
(First horse cars operated 1856.)



Gov. Du Ref.
*HE4491
B75M3
1963/66



New 'T' sign makes transit stations easy to spot from a distance.

THE ORGANIZATION OF THE AUTHORITY

The West End Street Railway Company, forebear of the Massachusetts Bay Transportation Authority, stated in its first annual report issued in November, 1888, "Until the business could be brought into a system and properly organized, it was impossible to manage it with proper economy . . ."

What was true then obtains today, and, to attain this objective, the Authority has instituted a new management organizational structure and cost reduction program.

This program, a modification of a plan submitted to the Authority by one of the country's top management consulting firms, provides for nine major departments reporting to the General Manager and the Board of Directors — General Counsel and Chief Legal Officer, Treasurer, Director of Public Relations, Chief of Police, Director of Personnel, Director of Materials, Director of Service and System Planning, Director of Transportation Operations, and Director of Engineering and New Construction. The latter three directorates report to the General Manager through the newly created position of Deputy General Manager for Engineering and Operations. Also created was the position of Special Assistant for Management, Programming and Control, reporting directly to the General Manager.

The new organizational structure makes possible the dynamic leadership demanded by the dimensions

of the Authority's responsibilities to the Commonwealth in the field of mass transportation.

The cost reduction features of the program represent a forward step towards functional control of financial operations. The institution of such a program will have not only a powerful long-range impact on operational expenses, but has demonstrated short-range economies.

A comparison of the thirteen month period under review with the thirteen month period ending August 31, 1965, shows an increase in revenue from transportation of \$305,000. The total of wage increases as a result of new agreements with several Authority unions amounted to \$2,071,406.56.

The institution of the aforementioned management programs, providing for increasingly more effective utilization of the Authority's manpower resources, enabled management to hold down the wage increase to \$1,846,000 — a saving of over \$200,000.

This represents a net economic improvement of more than a half a million dollars in the net cost of service.

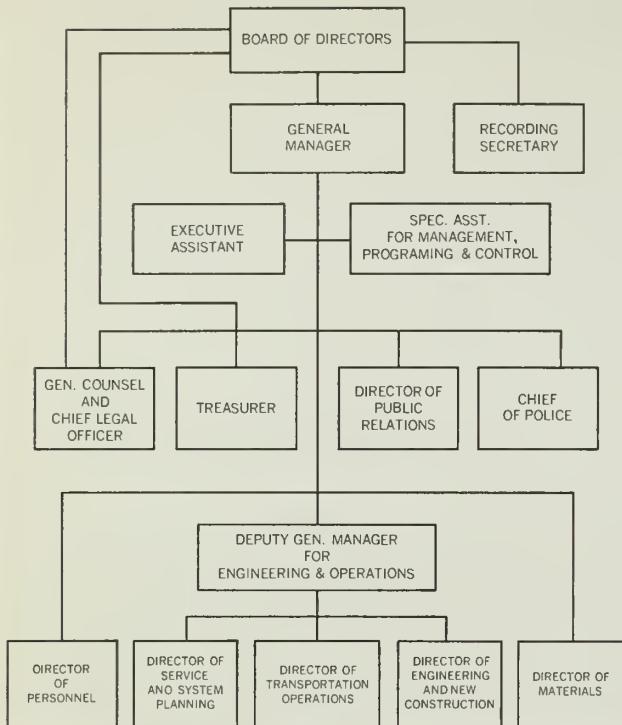
As the above management tools become polished with use and as others currently under consideration are adopted, the Authority will be able more effectively to perform management's elemental roles — planning, organizing, motivating, and controlling.

* * * * *

On December 1, 1965, the Authority lost the dedicated and distinguished services of its first Chairman of the Board of Directors, General James McCormack, who assumed the Chairmanship on August 4, 1964. General McCormack resigned to become Chairman of the Board and Chief Executive Officer of the Communications Satellite Corporation.

On January 8, 1966, the Governor of the Commonwealth appointed Judge Charles C. Cabot as a member of the Board of Directors for the remainder of the unexpired term of General McCormack, and designated Judge Cabot as Chairman of the Board.

MANAGEMENT ORGANIZATION



LEGISLATION

Under the aegis of the General Counsel and Chief Legal Officer, and following consultation with the Advisory Board to the Authority and other interested parties, the Board of Directors authorized filing with the 1966 legislature petitions for the following legislation:

- ... a bill providing for the establishment of a Police Department by the Authority.
- ... a bill relative to the number of guards on rapid transit trains operated by the Authority eliminating the requirement that there be one guard for every two cars.
- ... a bill requiring a sixty day notice to the Authority of personal injuries and property damages.
- ... a bill relative to the length and width of motor buses owned by the Authority which may be operated within the territorial limits of the Authority.
- ... a bill exempting the Authority from the requirement of filing removal bonds in automobile tort cases.
- ... a bill relating to the powers of the Authority in constructing, extending, modifying or improving mass transportation facilities.
- ... a bill relative to the awarding of concessions in or leases of property by the Authority.
- ... a bill making certain school transportation allowances to cities and towns included in the Authority area payable to the Authority rather than to the cities and towns.
- ... a bill relative to the sale of real estate by the Authority.
- ... a bill clarifying the provisions of the MBTA Act to make it clear that the Authority has the power to contract and do other necessary acts relative to its property and affairs in carrying out its powers and accomplishing its purposes under the Act.



New escalator and kiosk bring convenience and brightness to Central Square station.



- ... a bill authorizing the Authority to construct a bridge over the Mystic River and relating to construction of a bridge over the Neponset River.
- ... a bill extending the time for approval by the Advisory Board of Authority budgets from thirty days to sixty days.
- ... a bill relative to the awarding of leases and concessions to the highest responsible bidder and of certain contracts for construction, supplies, equipment, materials and services to the lowest responsible bidder after public advertising and public opening of bids.
- ... a bill providing that interest or other income received by the Commonwealth from investment or use of funds received from the one mill excise tax on cigarettes, pending the use of such funds for assistance to the MBTA and for other transportation purposes as set forth in Section 25B of Chapter 58 of the General Laws, shall be used for such assistance and other transportation purposes.

The following Acts and Resolve constitute the only legislation directly affecting the Authority which was adopted during the 1966 session of the legislature:

ACTS

- Chapter 636 — Providing that sales of real estate to the Commonwealth, its political subdivisions or public authorities by the Massachusetts Bay Transportation Authority shall be exempt from the law requiring competitive bidding thereon.
- Chapter 628 — Prohibiting the Massachusetts Bay Transportation Authority from disposing of or selling its power plants.
- Chapter 573 — Authorizing the Massachusetts Bay Transportation Authority to construct a

bridge over the Mystic River between the cities of Somerville and Medford.

- Chapter 433 — Providing for the submission to the voters of the Town of Maynard at the biennial state election in the current year of the question of adding said town to the Massachusetts Bay Transportation Authority.

RESOLVE

- Chapter 72 — Providing for an investigation and study by the Massachusetts Bay Transportation Authority of the feasibility of establishing a hydro foil water transportation system.

In addition to the filing of legislation and the maintenance of vital liaison between the Authority and the Advisory Board as well as the legislature, the General Counsel's office is responsible for the administrative function of private carrier regulation.

During the period under discussion the Authority has continued its program of supervising the passenger movement activities of private carriers within the 78 cities and towns. Fare changes, changes in schedules, including discontinuance of service, were reviewed, and, where circumstances required, public hearings and investigations were made.

The Middlesex and Boston Street Railway Company and the Authority signed a second agreement, extending through June of 1967, thus assuring a continuation of bus service in the 16 cities and towns of the Middlesex and Boston territory.

With the Authority's rapid transit extension plans entering the action stage, the Eminent Domain section of the General Counsel's office has assumed added importance, and during this period the staff has been increased in anticipation of its enlarged responsibilities.



*First electric passenger car used in Boston
by West End St. Railway, on Beacon St. Jan. 1, 1889.*

PROGRAM FOR MASS TRANSPORTATION

Prime among the many responsibilities of the Authority when it was established by the legislature in 1964 was the preparation of a program for mass transportation within the area constituting the Authority or, as it has come to be called, "a Master Plan."

The first public presentation of the Authority's Master Plan took place in May of 1966, as Advisory Board members, legislators, and business and community leaders were invited to the first spelling out of the plans for the future of mass transportation in the Authority district. The presentation was made by the General Manager and members of the Service and System Planning Department.

Following this initial exposure, the Planning Department met with the Authority's Board of Directors and the Advisory Board's Development Program Committee to discuss in detail the many ramifications of a program that will set the course of the Authority and have an effect on not only the district but the Commonwealth as a whole for many years to come.

The Board of Directors at the meeting of August 17, 1966, approved the program and authorized its submission to the Advisory Board for its approval. Eighteen days after the close of the period covered by this report the Advisory Board approved the Master Plan. The Development Program Committee filed a report recommending some modifications of the Authority's plans which will be carefully studied by the Authority.

A detailed description of the Authority's Capital Expansion Program will be found starting on page 9.

Demolition work on the old Neponset railroad bridge.



Typical open single-truck
(These cars used from 18



...breaking at Neponset Bridge; left to right — General Lincoln, Collins, Governor Volpe, former Governor Peabody, Judge Cabot.



The 'T's bridge as it will appear when completed.

CONSTRUCTION PROJECTS STARTED

This thirteen month period saw the start of construction on various segments of the Authority's program of modernization and expansion.

In November of 1965, for the sum of \$2,466,705, the Authority acquired from the Trustees of the New York, New Haven and Hartford Railroad Company all rights, title and interest in the land track and railroad facilities between Fort Point Channel in Boston and Pearl Street in Braintree for its rapid transit extension to the South Shore.

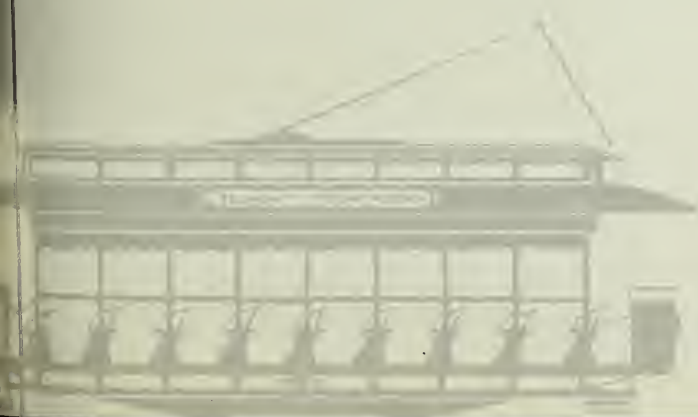
- ... a contract was let for the demolition of the old Neponset River railroad bridge and the work was completed.
- ... construction has begun on the substructure and approaches of a new rapid transit bridge over the Neponset River.
- ... a contract for the construction of the superstructure of the bridge will be awarded early in the next fiscal period.
- ... the preliminary design of grade separations along the route to the South Shore has been completed,

and final designs are in varying degrees of progress.

On August 10, 1966, a contract was let to the Perini Corporation of Framingham, Massachusetts, providing for the construction of a new two-track rapid transit tunnel and related facilities from the vicinity of Haymarket Square in downtown Boston, beneath the Charles River, to ground level at a point in Charlestown. The contract bid price was \$21,766,060.40, the Perini Corporation being the lowest responsible bidder.

The tunnel will be 4,000 feet long with a depth variance of from 25 to 65 feet, and a 500 foot ramp will be located on the northerly end which will bring the tracks to ground level. There will be a new underground rapid transit station along Haverhill Street, just south of Causeway Street.

In connection with the Haymarket-North rapid transit extension, during April of 1966 a Cooperation Agreement was executed between the Authority and the Boston Redevelopment Authority for a total reimbursement of \$12 million for the area from the Charles River to Sullivan Square.



In July of 1966, a contract was executed between the Authority and the Department of Housing and Urban Development following the successful application for a Capital Grant in the total amount of \$12 million.

Preliminary design of the Haymarket-North extension from Charlestown to the Malden-Melrose boundary is currently in process.

In connection with the proposed rapid transit extension along the Southwest Corridor, thirteen qualified Architect-Engineer consultants submitted technical method and qualification proposals for the design of sections of this expansion project. In addition, negotiations have been undertaken with an engineering firm for preliminary and final design of the South Cove Tunnel, an integral part of the Southwest Corridor Project.

During the second fiscal accounting period, the Authority embarked on an ambitious Station Modernization Program calling for the initial expenditure of some \$9 million; \$6 million will be provided as a result of a Capital Grant from the Department of Housing and Urban Development, \$2.7 million will be received in State assistance, with the Authority expending approximately \$300,000 of the total cost.

The Station Modernization Program eventually will affect 40 stations. It calls for imaginative treatment in such areas as lighting, directional signs, maps, advertising, wall and floor materials and turnstiles and fare collecting equipment.



In September of 1965, the Authority executed an agreement in joint participation with the City of Boston for the removal of a subway kiosk at the Tremont Street side of the Boston Common, and for the construction of a new kiosk to serve as an information booth for Boston's many tourists.

Arlington Station in downtown Boston has been selected as the pilot station in this program, and construction began at this location in June of 1966.

Nine other stations were in the detailed schematic design phase by the end of this reporting period.

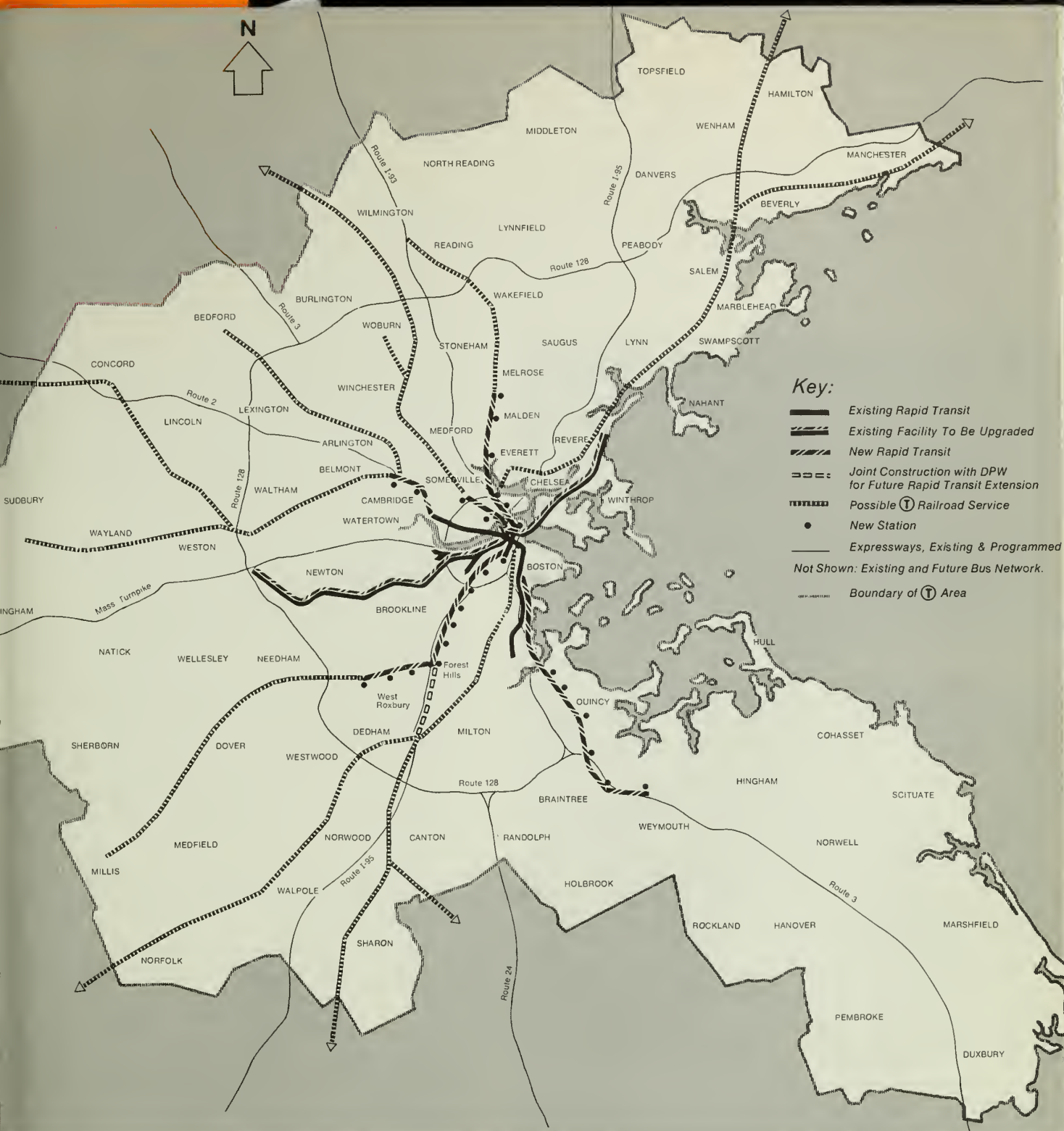
On May 28, 1966, a new escalator was opened to the public in the Central Square Subway Station of the Cambridge-Dorchester rapid transit line.

The modern escalator is unique in the Authority's system because of the unusual treatment of the escalator kiosk at street level. A vaulted plexiglass dome covers the escalator, designed not only to provide a more aesthetically satisfying structure than the usual cement pillbox type of kiosk, but also to engender a feeling of airiness, spaciousness and light penetrating down to the platform level of the subway station.

(The following description of the MBTA Capital Expansion Program was prepared as a separate self-standing report to be distributed to civic, political and business leaders in the 78 cities and towns comprising the Authority's district. It has been inserted here intact as a key part of this Annual Report.)



First bus operated by Boston Elevated Railway on North Beacon St., Brighton, beginning Feb. 24, 1922.



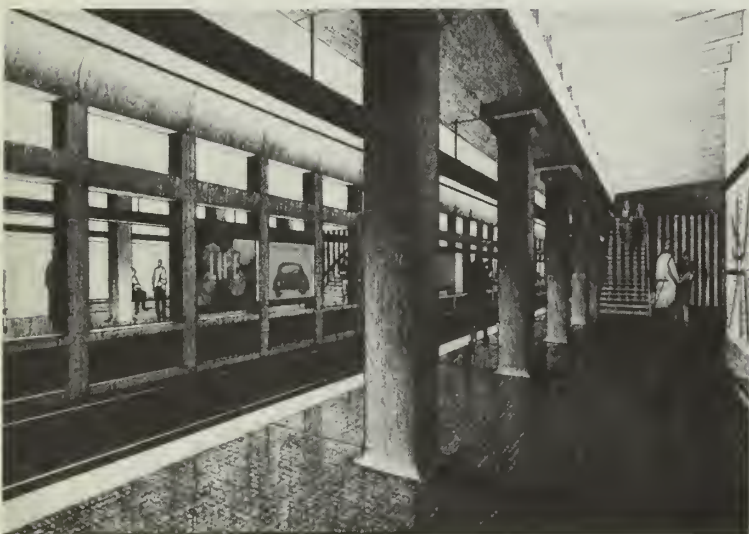
CAPITAL EXPANSION PROGRAM

In broad outlines, the Master Plan provides for —

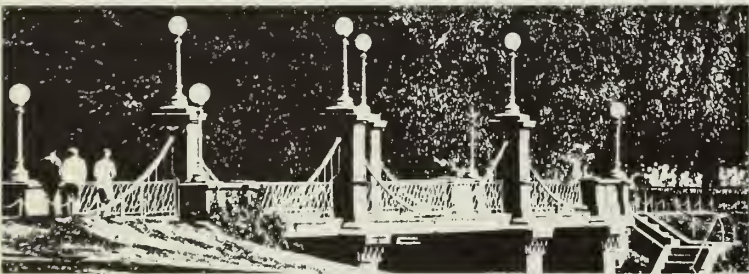
- Five new rapid transit extensions totalling 29 miles, and major improvements to a sixth.
- Air conditioning and modernization of existing rapid transit cars on the Forest Hills-Everett and Cambridge-Dorchester lines. Replacement of obsolete cars on the East Boston line. Advanced-design cars for the Riverside line. New rapid transit cars for the South Shore extension (and eventually for all lines.)
- Removal of all seven miles of the elevated portion of the Forest Hills-Everett line.
- Construction of 25 new rapid transit stations and modernization of existing stations.
- An increase to approximately 450 rapid transit vehicles from the present 264, and 300 new buses to replace obsolete equipment.
- An increase to approximately 25,000 parking spaces from the present 6,284.



New Arlington Station; kiosk with new sign.



Architect's sketch of remodelled platform area.



Wall mural of Public Gardens scene.

WHY A NEW T?

Boston had the first subway in the United States. The system has served its purpose well over the years, but, since World War II, the population has shifted radically, swelling the suburbs and shrinking the urban center. An expanded and improved transit system now is more vital than ever to meet the present and future needs of the central city and fast-growing neighboring communities.

Line extensions and other improvements will provide frequent, faster, more attractive, and more comfortable service. Such improvements will attract more riders, thereby reducing highway congestion. Commuting time will be cut substantially, both for people who ride the T and for those who still use the highways. The result will be more desirable communities in which to live and work.

In developing its Master Plan, the Authority has followed certain definite guidelines:

- The new system will be built upon the present one, which provides an excellent base for expansion and modernization.
- It must be competitive with other forms of travel in terms of speed, comfort, convenience, attractiveness and safety.
- The scope of the system must include all 78 member communities. And it must be flexible enough to meet future needs and adopt future technological improvements.
- Equipment and facilities must be provided for efficient yet economical service to all the communities within the system.
- Projects will receive priority when they tie in with major highway and other public works, which results in substantial cost savings on construction.
- Projects will also receive priority when they reach into a large and active transit market, providing efficient service that encourages favorable attitudes toward public transportation.
- Projects should allow replacement of low-speed costly local transit operations, be easy to reach by bus and auto over uncongested roads, and provide adequate parking facilities.

Improvements must be made now. The new T will be one of the key factors in determining how successfully metropolitan Boston and the Commonwealth compete with other metropolitan areas in the next few decades. Improved mass transit will make it easier for people to reach the various business, shopping, cultural and recreational centers throughout the MBTA district — thereby making this a highly attractive place to live.

WHAT ABOUT MONEY?

The MBTA already has a \$225 million bond authorization, of which \$145 million will be supported by the Massachusetts cigarette tax and the remaining \$80 million will be the responsibility of the Authority without state assistance. Federal transit aid funds totalling at least \$126 million are estimated to be available through 1972. Also, Federal urban renewal funds of \$12 million have been secured through the Boston Redevelopment Authority for demolition of the Charlestown elevated. An additional \$6 million will be realized from the sale of the obsolete Bennett-Eliot yards and shops in Cambridge.

A controlled schedule of construction and funding has been worked out to provide more funds than those required for the chosen immediate action projects, creating a \$22.8 million reserve fund. Construction and other improvement schedules will be timed to take advantage of additional Federal funds as they become available.

The Authority is required by law to set its fare structure to cover all operating costs of rapid transit lines. Once built, every rapid transit line must be a self-supporting operation. It is anticipated that this will have the effect of reducing rather than adding to the deficit, thus relieving the tax load on member communities.

This self-sustaining stipulation was one of the main factors in selecting the particular Action Projects. New rapid transit extensions will go to areas with the greatest potential revenue. They will provide the best possible service, so that people will want to use the T rather than other forms of transportation. The point is to make the T so appealing that people will use it not just because they must, but because they prefer it.

NEW STYLE FOR STATIONS

The Authority has engaged seven top architectural firms to work on the first group of modernized stations. Their objectives will be to design more efficient and safer, and at the same time more attractive, stations that will be a pleasure to see and use. Even the entrances will complement their surroundings and make a real contribution to local community planning. Arlington station is the "pilot" project under this program.

Not every station can incorporate all of the new features, but new or completely modernized stations will generally include:

- Fluorescent lighting for brighter light with less glare. This lighting would be intensified at key areas such as directional signs, change booths, turnstiles and platform edges.
- Escalators in most new stations and major existing stations.
- Skylights wherever feasible, to let in natural daylight and dispel the "tunnel" feeling.
- Wider, brighter stairways with rubber safety treads and yellow-striped edges for better visibility.



New North Station — architect's sketch.

- Glazed tile walls that help make interiors attractive and are easy to keep clean. Platforms will have distinctive colors at each end wall — a deep red-orange stripe indicating the downtown direction, and a soft blue-green indicating out-of-town.
- Maps showing key points of interest within walking distance of the station.
- Big, new easy to read directional signs, rapid transit lines schematic maps, and a new detailed map of the entire Authority system.
- A public address system in every station to announce trains, schedule changes and — when necessary — the reason for a delay.

During 1967 alone the following situations will be extensively modernized — Columbia, Fields Corner, Bowdoin, Government Center, Aquarium (formerly Atlantic), Copley, Prudential, Maverick, Airport, Orient Heights, Wonderland, Essex and Kenmore. Modernization of the remaining stations will continue into 1968 and 1969.

A WORD ABOUT SECURITY AND SAFETY

An additional benefit of new and modernized station design is expected to be a far lower rate of crime, vandalism and accidents. Stations will have fewer supporting columns and other obstructions to provide a sweeping view of the entire platform and a less closed-in feeling in general. Change booths will be placed so that cashiers can view large areas.

Accident prevention will be aided by painted yellow strips at stairway and platform edges to make people more aware of them. Brighter lighting, new types of turnstiles and modern, wide escalators will also contribute to rider safety.



300 new air-conditioned buses are being added to the



Seats in South Shore car scientifically designed for maximum

NEW VEHICLES: WHAT WILL THEY OFFER?

Every T rapid transit line will see new cars added in just a few years. Because each line has its own physical characteristics, the design of the cars will differ from line to line. But as a case in point, here are some of the features of the new Alewife-South Shore extension cars, designed with the rider in mind. Many of these features are entirely new to Boston and some are unique in the nation's transit systems:

- Insulated walls, floors, and ceilings to cut outside noise.
- Air conditioning and heating (overhead and floor).
- Individual windows — tinted, insulated and coated against glare and heat.
- Soft, upholstered, contoured seats with padded arm rests.
- Brighter fluorescent lighting with special shields for soft, diffused light.



Shore car, designed for passenger comfort and convenience.



- Clear view through front and side windows from sitting or standing position.
- A public address system to announce stations or to be instantly hooked up to a control station to announce changes or delays.
- Better visibility and a 2-way radio for the operator for increased safety factors.
- Headlights and safety signal devices.
- Exterior design that is simple, functional, and won't go out of style.

These cars will be built to the Authority's specifications. Because every detail will be fully planned and designed in advance, construction costs will be tightly controlled.

New buses, air-conditioned and with modern and more comfortable interiors, will improve local and feeder service to rapid transit lines. Early in 1967, 175 of the needed 300 new buses will go into active service.

COLOR CODING FOR QUICK IDENTIFICATION

Even a stranger to the Massachusetts Bay area will be able to find his way around easily by watching for color codes running throughout the T system. Each rapid transit line will be coded — blue, red, orange or green. Each bus line feeding a transit line will carry the same color in its destination signs. Color-coding will also appear on maps, directional signs, bus stops, and other informational materials.



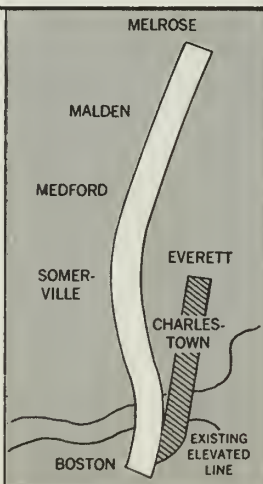
New bus destination signs will be color-coded to indicate the rapid transit line with which the bus connects.

HIGHLIGHTS OF THE TRANSIT LINE IMPROVEMENTS

Virtually every transit rider will benefit — how much depends upon what line he usually rides and where he lives and works. New extensions and bus feeder lines will take people to the regional center, their homes, and suburban shopping areas faster and more comfortably than ever before. If a rider has to use his car part of the way, he'll be able to park in paved lots all day. Or there will be "live parking" areas for those who prefer to be dropped off and picked up. Here are brief outlines and figures for each extension:

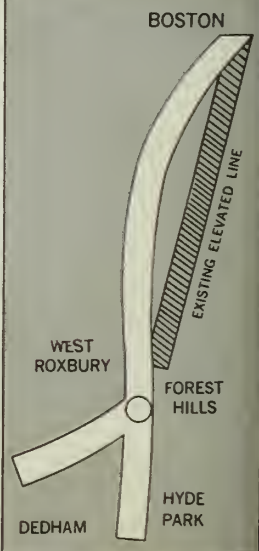
- **Orange Line North:** Work is now being done on a new tunnel from Haymarket, under the Charles River to Charlestown. From there the line will travel on the surface to the Malden-Melrose line. Stations will include a modernized Haymarket, a new underground North Station, Community College and a new Sullivan Square in Charlestown, Wellington in Medford, and Malden Center and Oak Grove in Malden. All-day parking will be at Malden and Medford, with "kiss-and-ride" parking at other stations. Existing transit cars on this line will be air conditioned and modernized, and new air-conditioned cars added.

Orange Line North	
Distance from Malden terminal to downtown	6.1 miles
Estimates:	
Average peak-hour time, terminal to downtown	10 minutes
Commuting time saved vs. present methods	11.5 minutes
24-hour, 2-way riders (average week-day)	76,800
Morning peak-hour autos diverted	1,300
Annual rapid transit revenue	\$4,592,000
Construction to start	In progress
Completion to new Sullivan Sq.	1968
Demolition of Charlestown elevated*	1969
Completion to Oak Grove	1970
Total projects costs (millions)	\$75.9*
*This gains \$12 million of Federal urban renewal funds.	

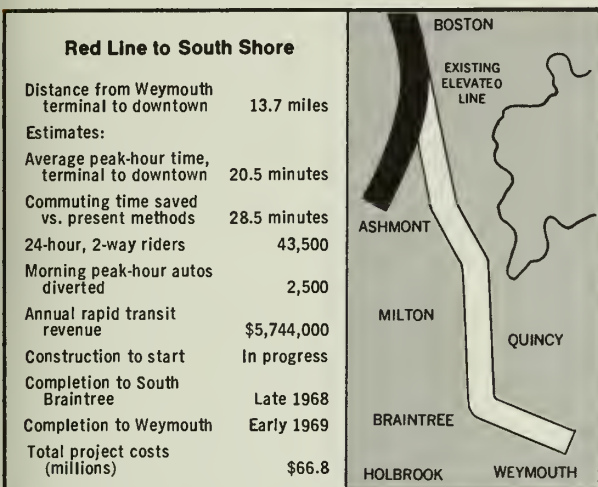


- **Orange Line Southwest:** Beginning with a new tunnel in Boston's South Cove area, a new, relocated line and extension will run over a railroad right-of-way to the V.F.W. Parkway in West Roxbury. New stations will be at Medical Center (South Cove), Back Bay, Northeastern, Roxbury Crossing, Jackson Square, Green Street, Forest Hills, Roslindale Center, West Roxbury business area and V.F.W. Parkway. Existing cars will be air-conditioned and modernized, and new air-conditioned cars added. A branch extension will be built from Forest Hills to Readville, coordinated with the building of the Southwest Expressway.

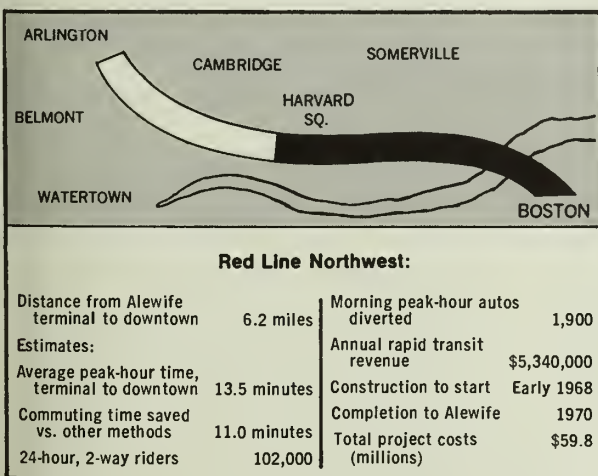
Orange Line Southwest	
Distance from V.F.W. terminal to downtown	8.4 miles
Estimates:	
Average peak-hour time, terminal to downtown	15.5 minutes
Commuting time saved vs. present methods	15.0 minutes
24-hour, 2-way riders (average week-day)	110,900
Morning peak hour autos diverted	1,700
Annual rapid transit revenue	\$6,344,000
Construction to start on new tunnel and V.F.W. extension	Early 1967
Construction to start on Readville extension	1968
Completion of V.F.W. extension (with temporary service over present elevated).	1969
Completion of Readville extension	1971
Demolition of Washington Street elevated	1973
Total project costs (millions)	\$65.6



Red Line to South Shore: A high speed South Shore extension will branch off the present Cambridge-Dorchester line between Andrew and Columbia stations and go to the junction of Route 128 and the Southeast Expressway in Weymouth. People will ride in brand new, air-conditioned, insulated cars with upholstered, natural contour seats. Stations will be at North Quincy, Wollaston, Quincy Center, North Braintree, South Braintree and Weymouth.



Red Line Northwest: A new subway and surface extension, coordinated with Route 2 highway construction, will run from Harvard Square to Alewife Brook Parkway. The line will go through a new tunnel from Harvard to Porter Square, then on the surface over railroad right-of-way. New cars to be added will be the same as new South Shore cars.

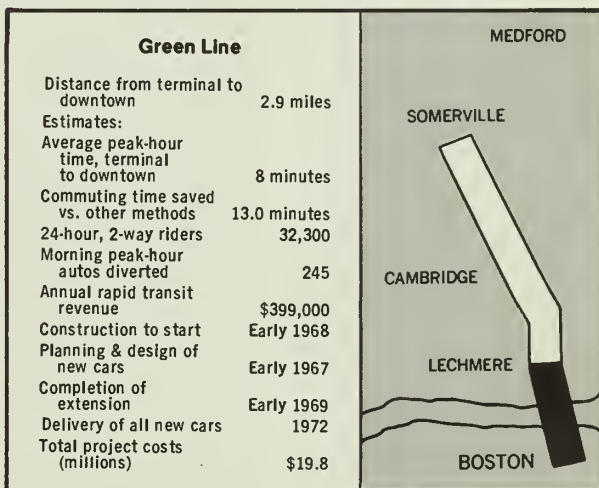


Red Line to Ashmont: The present service to Ashmont will be improved by the lengthening of station platforms to allow 6-car trains for rush hour service. Additional cars for greater seating capacity will be acquired and the existing 92 cars in service between Harvard and Ashmont will be improved and air conditioned.

- **Green Line:** The complexity of the Green Line streetcar surface-and-subway system, with its many on-street branches, and a host of alternative downtown improvements to consider, requires a major separate study before any facility improvement can be instituted. However, the following two projects are approved but will not be committed until the results of the study are weighed.

The first of these approved projects is a complete vehicle replacement for the Green Line's Riverside high-speed streetcar route. This will consist of 90 air-conditioned, low-platform, higher performance cars of a new design. The present cars being used on the Riverside line will be assigned to other Green Line streetcar routes permitting the disposal of obsolete equipment.

The improvements scheduled in the Action Program for the other end of the Green Line consist of a surface extension over railroad right-of-way out to McGrath Highway and Washington Street in central Somerville. A new Lechmere station will be built on the opposite side of McGrath Highway from the present one. This project will be coordinated with the development of Somerville Industrial Park. This extension will be served by the new cars purchased for the Riverside to Somerville route.



- **Blue Line to Wonderland:** This is the most recent high-platform rapid transit extension in the region, built in 1951 when the East Boston line was extended from Maverick Square in East Boston to Wonderland in Revere. Improvement of the Blue Line will include the acquisition of 32 new, air-conditioned high-performance cars to replace obsolete cars which are more than 40 years old. Transit cars purchased in 1951 when the Blue Line was extended will be used only for peak-hour service. New equipment will be placed in service in 1971.

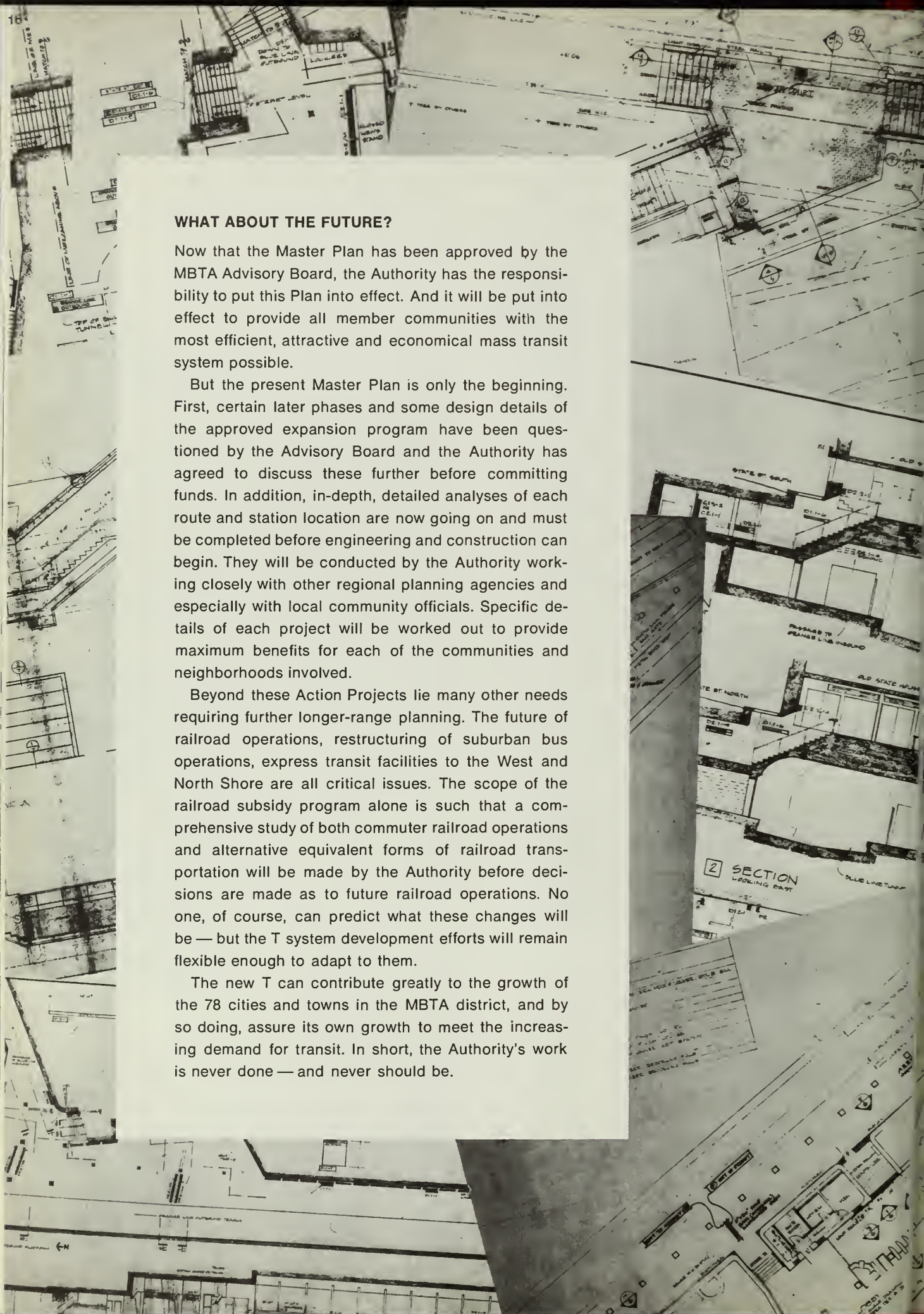
WHAT ABOUT THE FUTURE?

Now that the Master Plan has been approved by the MBTA Advisory Board, the Authority has the responsibility to put this Plan into effect. And it will be put into effect to provide all member communities with the most efficient, attractive and economical mass transit system possible.

But the present Master Plan is only the beginning. First, certain later phases and some design details of the approved expansion program have been questioned by the Advisory Board and the Authority has agreed to discuss these further before committing funds. In addition, in-depth, detailed analyses of each route and station location are now going on and must be completed before engineering and construction can begin. They will be conducted by the Authority working closely with other regional planning agencies and especially with local community officials. Specific details of each project will be worked out to provide maximum benefits for each of the communities and neighborhoods involved.

Beyond these Action Projects lie many other needs requiring further longer-range planning. The future of railroad operations, restructuring of suburban bus operations, express transit facilities to the West and North Shore are all critical issues. The scope of the railroad subsidy program alone is such that a comprehensive study of both commuter railroad operations and alternative equivalent forms of railroad transportation will be made by the Authority before decisions are made as to future railroad operations. No one, of course, can predict what these changes will be — but the T system development efforts will remain flexible enough to adapt to them.

The new T can contribute greatly to the growth of the 78 cities and towns in the MBTA district, and by so doing, assure its own growth to meet the increasing demand for transit. In short, the Authority's work is never done — and never should be.





DEPARTMENTAL PROGRESS REPORTS

TRANSPORTATION DEPARTMENT

While the future must be provided for, the main business of running a mass transportation system serving an area containing almost one half of the total population of the Commonwealth has engaged the Authority's careful attention during each of the 396 days of the period under report.

From August 1, 1965, through August 31, 1966, the Authority's vehicles operated a total of 38,260,412 revenue miles. When one takes into consideration the miles operated by the three transportation systems subsidized by the Authority, the total service miles operated amount to 44,787,477.

In addition to the daily provision of the above service, the Authority has been ready to face whatever out-of-the-ordinary challenges have arisen.

At 5:21 p.m., November 9, 1965, a massive power failure, which affected the entire Northeast section of the United States, blacked out the Boston area. Despite inadequacies in its own power generating facilities, all Authority properties, including stations and tunnels, were lighted throughout the emergency. As early as 7 p.m., all Authority lines were in operation. Earlier, during the blackout, when some lines were temporarily affected, substitute bus service was provided to help commuters get to their destinations.

At midnight, March 30, 1966, a nationwide railroad strike affected service on the Boston and Maine commuter lines in this area. Shortly after midnight, Authority personnel went to work on the pressing problem of providing transportation the following morning for the 12,000 commuters who were unaware of the strike call.

Working throughout the night, the Authority, with the cooperation of local police departments and the Boston Traffic Commission, made arrangements with local common carriers to have extra transportation available for as long as the walkout lasted.

Recognizing the public's reaction to the provision of service during the emergency, the Board of Directors of the Authority voted a resolution commending its employees, the cooperating bus companies and police departments, officials of the Boston and Maine Corporation, the Boston Traffic Commission, and the various news media for their rapid, efficient response in a time of transportation crisis.

Some of the service improvements effected during this thirteen month period were as follows:

- ... in September of 1965, express bus service was provided from Harvard Square in Cambridge to Lake Street, Arlington, during rush hour periods.
- ... in October of 1965, additional collectors were provided in the Central District, thus ensuring that an employee would be on duty at all times that the stations are open to the public.
- ... in November of 1965, additional bus service was instituted on the Airport shuttle line running between Airport Station and Logan International Airport.
- ... in January of 1966, the Beachmont bus line was extended on a trial basis to serve the Coolidge Street Housing Project in Revere, and, proving successful, this service is still in existence.
- ... in June of 1966, evening service was inaugurated between Harvard Square and Arlmont Village in Arlington.

TREASURER'S DEPARTMENT

Of major import to the Treasurer's Department in the past thirteen months has been the installation of a Responsibility Accounting System for use throughout the Authority. The system became effective on September 1, 1966, with the beginning of the third fiscal accounting period of the Authority. The Authority's computer will be programmed to produce responsibility reports, and each responsibility area supervisor will be taking an effective part in planning and controlling the current and future performance of the Authority.

In brief, responsibility reporting is designed to control expenditures by directly relating the reporting of expenditures to individuals in the Massachusetts Bay Transportation Authority's organization who are responsible for their control.

By definition it is a system of accounting which is tailored to the Authority's organization so that costs

are accumulated and reported by levels of responsibility within the Authority's organization. Each responsibility area in the MBTA is charged only with the cost for which it is responsible and over which it has control.

In keeping with the Authority's attempts to formulate effective methods of administrative control over Authority operations, a Manager of Systems and Procedures was appointed to work in the Treasurer's Department. The basic function of this new position is the development, establishment and installation of modern systems and procedures, including data processing applications, studies of the Authority's clerical operations to develop effective methods, standards and controls, forms design and control, and other modern management information systems.

POLICE DEPARTMENT

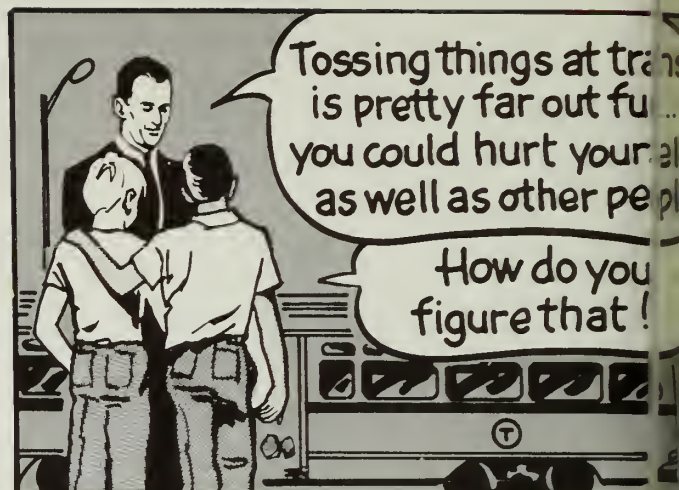
While the legislature was studying the bill filed by the Authority to create an Authority police force, the Mayor of Boston made available a thirty-five man unit of Boston Police Officers to patrol the Boston area of the Authority's operations.

A fully equipped police station was established at the Authority's Dudley Street Station. This is the main nerve center directing the operations of this unit.

During this second fiscal period the Police Chief and Deputy Chief developed community relations programs in a concerted effort to combat vandalism and crimes on Authority property.

One of the most well-received programs was a co-operative effort between the Authority Police Department and the Boston School Department. A leaflet containing an anti-vandalism message was prepared by Authority personnel for distribution to all public junior and senior high schools in the City of Boston.

It is planned to enlarge the distribution of this pamphlet to include all parochial schools in the Archdiocese and other schools in the Authority district.



Anti-vandalism "cartoon strip" featuring Bob Cousy attracted much favorable comment from educators, law enforcement officials.

PERSONNEL DEPARTMENT

The adoption of a modern management organizational program saw the creation of an efficient, up-to-date Personnel Department, employing the latest in personnel policies and programs.

In November of 1965 a Manager of Personnel Development was appointed with jurisdiction over training, performance appraisal and review, identification of potential managerial personnel, and development of programs to improve job performance. Among these programs are the following:

- ... Programmed Instruction for Management Education in the areas of cost reduction and control for supervisors.
- ... an Employee Educational Assistance Program which provides for reimbursing employees 50% of the cost of approved courses which will make the individual more valuable to the Authority and increase his potential for advancement.

During these past thirteen months various testing procedures governing the initial employment as well as promotion and transfer of employees have been developed and put into operation by the Employment Section.

- ... 387 applicants for stenographic positions were tested.

... 300 applicants for the position of Extra Starter were tested.

... 245 applicants for the position of Extra Inspector were tested.

... a special Heart Research Program in cooperation with the Harvard School of Public Health was instituted and in less than six months, more than 800 employees have participated in this program.

The Compensation and Personnel Services Section is responsible for the administration of wages and salaries. Guidelines for managerial administration have been formulated as well as a relativity scale of clerical grades to management positions.

In the sensitive area of labor relations, the Authority's record continues to be bright. For the second consecutive fiscal period all labor disputes, grievances and contract matters were settled through negotiations without the necessity of resorting to arbitration.

The economic importance of this accomplishment is illustrated by the realization that, from 1960 through 1964 arbitration costs to the Authority and to Local 589 alone, amounted to almost half a million dollars.

New agreements were negotiated and signed with the following unions:

... Local Division No. 589, Amalgamated Transit Union, the Carmen's Union, the largest union on the property, with a numerical strength of approximately 3,765 out of a total approximate strength of 5,554. This is a three year agreement running through December 31, 1968.

... Local 105, American Federation of Technical Engineers, AFL-CIO, covering approximately 60 employees including engineers, architects, chemists and draftsmen. This is also a three year agreement.

... Division 89, Transportation-Communication Employees Union covering approximately 30 workers who operate our signal towers. This agreement is for a three year period commencing January 1, 1966.

... Local 264, International Association of Machinists and Aerospace Workers, AFL-CIO, covering approximately 325 employees. Another three year agreement effective January 1, 1966.

Through further successful negotiations, the Authority and Local 589 signed two agreements which represented the final steps needed for the Authority to become eligible to receive \$15.2 million in Federal funds through the Transportation office of the Department of Housing and Urban Development.

Twelve million of the anticipated funds will be used to defray part of the cost of the \$26 million Haymarket-Charlestown tunnel project, and \$3.2 million will be used for the acquisition of 150 new air-conditioned buses.

The need for the labor agreement in securing Federal funds stems from the Secretary of Labor's requirement that a written agreement between the primary bargaining unit and the applicant, providing employee protection for those affected by the projects, be signed before approval is given to the application for Federal aid.

ENGINEERING AND NEW CONSTRUCTION DEPARTMENT

The Engineering and New Construction Department has the hard hat responsibility for the Authority's overall modernization and expansion program and has developed and instituted during the past thirteen months the following modern management procedures:

- ... the implementation of pre-qualification procedures designed to determine ratings for prospective contractors which will reflect the contractors' abilities both financial and professional.
- ... development of standard specification formats for construction contracts, architectural services contracts and engineering services contracts.
- ... development of standard administrative procedures for maintenance of contract administration files, processing of payment estimates and vouchers, bid openings and analysis of bids.

The program control function has been staffed with a program controller and a project control engineer for each new construction project. Program Evaluation and Review Techniques and Critical Path Methods system requirements have been developed and put



25-foot closed double-truck boxcar in use from 1890 to 1928.

into use for monitoring individual engineering, architectural, and construction contracts.

In January of 1966 the Authority entered into an agreement with the Massachusetts Institute of Technology for development of a computer program called "Project", a building block of the overall Integrated Computer Engineering System; and in August of 1966 the Authority applied to the Department of Housing and Urban Development for a demonstration grant for soil research in connection with the Haymarket-Charlestown Rapid Transit Tunnel. Field measurements and analysis in connection with this program are being conducted by the Massachusetts Institute of Technology in cooperation with Authority personnel.

In addition to the above, seven administrative computer programs have been developed to assist the department in qualitative and quantitative control of all projects. These programs provide proper control and instantaneous data from the bid opening to the final acceptance of all projects. They will also provide cost data for any future projects undertaken by the Authority.

An Industrial Engineering Section was added to the staff of the Department of Engineering and New Construction during this period. Phase I of a long-range Industrial Engineering Program is currently and actively under way. It will concentrate on developing engineering performance standards, distribution of labor costs including the separate reporting of delay or idle time, production counts subject to control or audit, performance reporting by organizational element.

During the past thirteen months the Equipment Engineering and Maintenance Section in a continuing effort to reduce operating costs made several improvements in its shop facilities.

... ultrasonic testing equipment for on-car axle crack

detection has been installed and testing procedures have been developed.

... a new wheel boring machine has been installed and has increased production potential by 700%.

... new silk screen process equipment has been installed in the paint shop.

... a new painting booth for spray painting of Authority rolling stock was authorized for the Everett Shops.

MATERIALS DEPARTMENT

The Materials Department has streamlined its purchasing procedure, has installed an improved form of inventory control, has begun a value analysis and vendor evaluation program.

The physical Stores Division has been consolidated with the Materials Department. This move, involving the transfer of thirty employees, has resulted in a more efficient framework of materials management.

A new material and supply inventory control system has been developed and established in the Department.

A Manager of Purchasing Analysis and Specifications has been hired. His attention will be directed to reducing the total life cost of materials and services to the Authority without impairing, and improving where possible, the function, quality, reliability, maintainability, and delivery of the materials involved.

During this fiscal period the Materials Department requested proposals and placed orders for 175 new air-conditioned buses. Shortly after the close of the current period, the first delivery of the new vehicle was received by the Authority.

*Present Red Line subway car
in use since May 1, 1963.*



SERVICE AND SYSTEM PLANNING DEPARTMENTS

The prime task of this group has been the preparation of the Authority's first Comprehensive Development Program for Public Transportation in the Massachusetts Bay Area and the concomitant development of a long-range Capital Expansion Program. Both of these vitally important projects have been covered elsewhere in this report.

On January 1, 1966, the Service and System Planning Departments were augmented by the addition of an Operations Planning Department. Included in this section are the schedule and timetable functions plus the supervisory group involved with monitoring private carrier contracts. This group also includes an operations analysis section dealing with short- and long-range improvements to the operating system and providing assistance in planning extension projects.

During the fiscal year the Planning Department moved the station modernization program into actual construction with the Arlington Station project.

During the fiscal year Planning moved most of the South Shore projects from the detailed planning stage into the New Construction Department. Notable among these was the design of the new South Shore transit cars needed to serve this corridor. The Planning Department participated with an inter-departmental team established to prepare the specifications for these vehicles which introduced a number of user-comforts, such as air conditioning, comfortable seats and seating arrangements and improved lighting.

The Department, in cooperation with Equipment Engineering and Maintenance, also completed the design specifications for a new look in the Authority's buses, including such elements as new interior materials, new seating, new destination signs, and new exterior color schemes.

FINANCIAL STATEMENTS

The balance sheet and statement of long-term debt of the Massachusetts Bay Transportation Authority as of August 31, 1966, and the related statements of revenue and cost of service, unreimbursed cost of service, and source and disposition of funds for the thirteen month period ended August 31, 1966, together with notes relating to these financial statements are appended to this report.

Respectfully submitted, Board of Directors
Massachusetts Bay Transportation Authority

Charles C. Cabot

Judge Charles C. Cabot, Chairman

William J. Fitzgerald

William J. Fitzgerald

Robert P. Springer

Robert P. Springer

Philip Kramer

Philip Kramer

George L. Anderson

George L. Anderson

December 1, 1966

ARTHUR ANDERSEN & CO. BOSTON, MASSACHUSETTS

To the Board of Directors,
Massachusetts Bay Transportation Authority:

We have examined the balance sheet and statement of long-term debt of MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (a political subdivision of the Commonwealth of Massachusetts) as of August 31, 1966, and the related statements of revenue and cost of service, unreimbursed cost of service, and source and disposition of funds for the thirteen month period ended August 31, 1966. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying financial statements present fairly the financial position of the Massachusetts Bay Transportation Authority as of August 31, 1966, and the result of its operations and the source and disposition of funds for the thirteen month period ended August 31, 1966, in conformity with generally accepted accounting principles. Except for the change in the method of providing for depreciation described in Note 5, in our opinion, the accounting principles were applied on a basis consistent with that of the preceding year.

Arthur Andersen & Co.

Boston, Massachusetts,
November 10, 1966.



MASSACHUSETTS
BAY
TRANSPORTATION
AUTHORITY

BALANCE SHEET
AUGUST 31, 1966

ASSETS

TRANSPORTATION PROPERTY, at cost	\$205,174,456	
Less — Reserve for depreciation (Note 5)	73,820,461	\$131,353,995

CURRENT ASSETS:

Cash	\$ 1,940,014	
U. S. Treasury bills, at cost	14,903,444	
Special deposits	1,070,011	
Construction and railroad aid funds including U. S. Treasury bills of \$20,370,958, at cost	20,448,980	
Accounts receivable — Commonwealth of Massachusetts	14,948,671	
Other	1,005,850	
Materials and supplies, at average cost	2,342,772	
Prepaid expenses	255,465	56,915,207

DEFERRED CHARGES:

Unamortized expansion and modernization costs (Note 1)	\$ 4,775,917	
Other	958,165	5,734,082
		\$194,003,284

LIABILITIES

LONG-TERM DEBT, less current maturities, see accompanying statement	\$134,353,410
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UNREIMBURSED COST OF SERVICE	(3,576,401)
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CURRENT LIABILITIES:

Current maturities of long-term debt	\$ 3,590,259	
Notes payable	54,000,000	
Accounts payable	2,204,659	
Accrued liabilities — Payroll	495,967	
Interest	1,484,869	
Other	1,045,765	
Unredeemed tickets and tokens	381,304	63,202,823

DEFERRED CREDITS	23,452
	\$194,003,284

The accompanying notes are an integral part of these financial statements.

**STATEMENT OF REVENUE AND COST OF SERVICE
FOR THE THIRTEEN MONTH PERIOD ENDED AUGUST 31, 1966**

OPERATING REVENUE:	
Transportation	\$42,310,196
Other	884,962
	<u>\$43,195,158</u>
OPERATING EXPENSES:	
Transportation service	\$33,046,425
Maintenance	12,289,529
Electric power	2,800,124
Depreciation (Note 5)	6,063,514
General and administrative expenses — Salaries and wages	3,685,675
Employee pension and insurance benefits (Notes 2 and 4)	5,111,092
Injuries and damages (Note 3)	2,027,392
Other	926,832
	<u>\$65,950,583</u>
Operating loss	\$22,755,425
OTHER INCOME, including interest of \$1,093,889	(1,192,247)
INTEREST EXPENSE, including \$4,235,197 on long-term debt	5,197,477
DIVIDEND — Transit Mutual Insurance Company (Note 4)	(624,092)
Cost of service in excess of income	<u>\$26,136,563</u>

**STATEMENT OF UNREIMBURSED COST OF SERVICE
FOR THE THIRTEEN MONTH PERIOD ENDED AUGUST 31, 1966**

BALANCE, JULY 31, 1965	\$ —
ADD — Additional depreciation for the period August 4, 1964 to July 31, 1965 (Note 5)	1,526,000
BALANCE, JULY 31, 1965, as adjusted	\$ 1,526,000
ADD — Cost of service in excess of income for the thirteen month period ended August 31, 1966	26,136,563
DEDUCT:	
Cost of service reimbursed by the Commonwealth of Massachusetts to be assessed to the cities and towns constituting the Authority	(20,603,052)
Contract Assistance, portion of the cost of service paid by the Commonwealth of Massachusetts in accordance with a contract for financial assistance between the Authority and the Common- wealth, pursuant to Chapter 563 of the Acts of 1964	(3,250,000)
State diesel and gasoline fuel taxes reimbursable to the Authority in accordance with Section 2 of Chapter 563 of the Acts of 1964	(233,110)
BALANCE, AUGUST 31, 1966	<u>\$ 3,576,401</u>

The accompanying notes are an integral part of these financial statements.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
STATEMENT OF LONG-TERM DEBT
AUGUST 31, 1966

Metropolitan Transit Authority Bond, payable in semiannual installments of \$500,000 to December, 2020 — interest payable is the interest payable by the Boston Metropolitan District on their contra debt and refunding issues, which for the thirteen month period ended August 31, 1966 was 2.38% \$54,312,372

Rapid Transit Bond, payable in annual installments of \$536,259 to November, 2024 — interest is the actual interest on the City of Boston Transit Debt less income collected on the City's transit debt sinking funds, which for the thirteen month period ended August 31, 1966 was 3.58% \$31,639,297

Equipment Serial Bonds:

YEAR OF MATURITY	APPROXIMATE ANNUAL PAYMENT	INTEREST RATE		
1970	\$ 16,000	2.00%	\$ 62,000	
	130,000	2.40	520,000	\$ 582,000
1971	84,000	1.50	\$ 419,000	
	139,000	3.10	695,000	1,114,000
1973	46,000	2.50	\$ 316,000	
	90,000	3.50	630,000	946,000
1974	8,000	3.00		70,000
1975	122,000	3.00		1,208,000
1977	218,000	3.00		2,404,000
1978	207,000	3.00		2,260,000
1981	127,000	1.50		1,906,000
1987	127,000	2.90		2,677,000
1988	131,000	2.90		2,882,000
1993	168,000	3.00	\$4,560,000	
	100,000	3.20	2,800,000	7,360,000
	<u>\$1,713,000</u>			<u>\$23,409,000</u>

Construction Bonds:

2.00%, payable \$102,000 per annum to November 21, 1979, and \$4,590,000 on November 25, 1979	\$ 6,018,000
1.50%, payable \$84,333 per annum to March 1, 1981, and \$3,781,667 on March 1, 1981	5,046,667
2.10%, payable \$22,000 per annum to January 15, 1982, and \$990,000 on January 15, 1982	1,342,000
2.75%, payable \$47,000 per annum to March 1, 1983, and \$2,115,000 on March 1, 1983	2,914,000
2.30%, payable \$10,000 per annum to March 1, 1984, and \$450,000 on March 1, 1984	630,000
3.00%, payable \$55,000 per annum to July 1, 1988, and \$2,475,000 on July 1, 1988	3,685,000
3.60%, payable \$69,667 per annum to February 1, 1989, and \$3,135,000 on February 1, 1989	4,737,333
3.50%, payable \$19,000 per annum to September 15, 1990, and \$855,000 on September 15, 1990	1,330,000
3.20%, payable \$40,000 per annum to April 15, 1993, and \$1,800,000 on April 15, 1993	2,880,000
	<u>\$ 28,583,000</u>
	<u>\$137,943,669</u>
	<u>(3,590,259)</u>
	<u>\$134,353,410</u>

Less — Current maturities of long-term debt
Long-term debt

STATEMENT OF
SOURCE AND DISPOSITION
OF FUNDS FOR THE THIRTEEN MONTH
PERIOD ENDED AUGUST 31, 1966

CASH BALANCE — AUGUST 1, 1965 \$2,488,4

FUNDS WERE PROVIDED FROM:

Commonwealth of Massachusetts To be assessed to the cities and towns constituting the Massachusetts Bay Transportation Authority: Amount due on the 1965 deficit	\$17,683,0
Advance on the 1966 deficit	6,500,0
Contract assistance in accordance with Section 28 of Chapter 563 of the Acts of 1964	3,318,0
State diesel and gasoline fuel taxes reimburseable to the Authority in accordance with Section 2 of Chapter 563 of the Acts of 1964	207,0
Issuance of short-term notes, net of payments	28,425,0
Sales of property	70,0
Working capital used	1,858,4
	<u>\$58,062,4</u>

FUNDS WERE USED FOR:

Cost of service in excess of income	\$26,136,563
Less — Depreciation charges to cost of service which did not require an expenditure of funds	(6,063,514)
	\$20,073,9
Purchase of U. S. Treasury Bills, net of sales	6,135,1
Payment of long-term debt	4,089,9
Increase in special funds	17,358,4
Expenditures related to the expansion and modernization of the transportation system	3,592,6
Additions to transportation property	7,362,7
	<u>\$58,611,6</u>

NET DECREASE IN CASH (548,2)

CASH BALANCE — AUGUST 31, 1966 \$1,940,4

*The accompanying notes are an integral part
of these financial statements.*

ES TO FINANCIAL STATEMENTS

UST 31, 1966

Unamortized Expansion and Modernization Costs

The Authority has deferred certain expenses related to the expansion and modernization of the transportation system. These costs will be amortized by charges to the cost of service, commencing with the completion of the initial project for mass transportation. Such costs include the Authority's share of contract assistance to the railroads who have temporarily continued passenger service until such time as permanent alternative facilities have been constructed by the Authority.

Pensions

The Authority has agreed to provide retirement benefits to employees through a contributory pension plan which requires payment by the Authority of an amount not less than 6% of the total payroll of employees who are members of the plan but, in any event, sufficient to provide for the current cost of the plan and interest on unfunded past service costs net of members' contributions. The Authority is not legally obligated, under the agreement, to fund the actuarial cost of future benefits to present and retired employees based on past service costs. At August 31, 1966, such unfunded costs amounted to \$35,000,000.

Injuries and Damages

The Authority is a self-insurer on claims for injuries and damages to the extent of \$50,000 per accident. Insurance coverage is carried on claims in excess of that amount up to a maximum limit of \$15,050,000 per accident. The Authority counts for injuries and damages by charges to operating expenses as payments are made. The estimated liability for injury and damage claims not provided for at August 31, 1966, amounts to approximately \$3,200,000.

Workmen's Compensation Insurance

Effective May 1, 1965, the Authority became a self-insurer on workmen's compensation claims under the workmen's compensation laws of the Commonwealth of Massachusetts to the extent of \$50,000 per occurrence. Insurance coverage is carried on each occurrence in excess of that amount up to a maximum limit of \$1,050,000 per occurrence. The Authority counts for these claims by charges to operating expenses as payments are made. The estimated liability for workmen's compensation claims not provided for at August 31, 1966, amounts to approximately \$350,000.

Prior to May 1, 1965, the Authority was insured for workmen's compensation claims by an affiliate, the Transit Mutual Insurance Company. In September, 1965, the General Court of the Commonwealth of Massachusetts enacted Chapter 687, which provided for the dissolution of The Transit Mutual Insurance Company and the acquisition of its assets and liabilities by the Massachusetts Bay Transportation Authority.

Transit Mutual's reserve for workmen's compensation claims as of May 1, 1965 has been carried over in the accounts of the Authority. The Authority charges payment of claims incurred prior to May 1, 1965 to this reserve.

The net assets of The Transit Mutual Insurance Company amounting to \$624,092 have been credited as a dividend to the cost of service of the Authority for the thirteen month period ended August 31, 1966.

5. Depreciation

For the period August 4, 1964 to July 31, 1965, the Authority provided depreciation of \$4,217,000 by crediting payments on long-term debt of \$3,727,000 together with a provision for depreciation of \$490,000 to the reserve for depreciation. If depreciation had been provided by following the generally accepted method of amortizing the cost of property over its estimated remaining useful life, additional depreciation of \$1,526,000 would have been charged to the cost of service.

As of August 1, 1965 the Authority retroactively adopted the generally accepted method of amortizing the cost of property over its estimated remaining useful life and accordingly has charged to unreimbursed cost of service \$1,526,000 for the period August 4, 1964 to July 31, 1965 and in the current thirteen month period has provided \$6,063,514 for depreciation of which \$4,013,113 represents payments on long-term debt. The balance of \$2,050,401 although charged to the cost of service will not be reimbursed at this time.

6. Construction Program

The Authority's program for mass transportation within the area constituting the Authority is estimated at \$369,000,000. Financing requirements of the program are expected to be met through the issuance of \$225,000,000 of long-term debt securities. The legislative act authorizing the issuance of debt securities calls for participation by the Commonwealth of Massachusetts in the payment of principal and interest on \$145,000,000 of that amount to the extent of 90% for express service projects and 50% for local service projects or assistance to private carriers. The remaining financing requirements are expected to be met through Federal transit aid, Federal urban renewal funds and sale of certain property. Expenditures on the program through August 31, 1966, have been financed through the issuance of short-term debt of \$33,000,000 which will be permanently financed through the issuance of the long-term debt securities.

As of August 31, 1966 the Authority has entered into purchase commitments amounting to approximately \$28,000,000. In that connection the Authority has received approval for approximately \$16,000,000 of Federal transit aid.



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